ASHP CLINICAL SKILLS COMPETITION 2011
PHARMACIST'S PATIENT DATA BASE FORM

Demographic and Administrative Information		
Name: Jones, Jim		Patient ID: 10161981
Address: 13 Remsen Ave		Room & Bed: Family Medicine Clinic, Exam Room 1
New Brunswick, NJ		Physician: Eisenstein
Date of Birth: 10/11/48		Pharmacy: CVS Pharmacy #562894
Height: 72" Weight: 112 kg		Race: African American
Gender: M		Religion: Baptist
History of Present Illness		**Vitals (Current and previous visits)**

		(9/15/11)	(9/1/11)	(12/15/10)
JJ presents to the family medicine clinic today (9-15-11) for follow-up of a recent hospitalization for a left hip fracture/osteoporosis evaluation. His fracture occurred on 9-1-11 when he fell while walking in a physical rehabilitation center. JJ was in rehabilitation following an ischemic stroke. He currently has intermittent pain when ambulating (4 out of 10) in his left hip. The patient self started acetaminophen as needed for pain, but has not had satisfactory pain resolution with this regimen. The patient complained of hip pain earlier in the year which prompted a work up including a DXA scan. The results of this scan were not followed up on with the patient. The patient states that recently he always seems to have a tickling sensation in the back of his throat and a dry cough. He has been in "good spirits" and is very determined to resume the level of independence he had prior to his stroke.		BP 138/86 mm/hg Pulse 75 bpm Temp 98.6 Resp 12 Pulse ox 96% Finger stick (FS) BG 110	BP 161/95 mm/hg Pulse 65 bpm Temp 98.9 Resp 10 Pulse ox 96% FSBG 290	BP 166/100 mm/hg Pulse 50 bpm Temp 99.6 Resp 12 Pulse ox 96% FSBG 200

Past Medical History	Chemistry (Current and previous visits)		
Ischemic stroke August 2011 Hip Fracture September 2011 Type 2 diabetes Hypertension CHF Dyslipidemia Generalized Anxiety Disorder	(9/15/11) Na 140 mEq/L K 3.6 mEq/L Cl 110 mEq/L CO_2 29 mEq/L BUN 15 mg/dL SCr 1.1 mg/dL BG 112 mg/dL WBC 6.0 x 10^9/L Hgb 12 g/dL Hct 38 % Plt 375 x 10^9/L PTT 30 s INR 1.0 TC 226 mg/dL HDL 30 LDL 136 TG 302 A1C 8.6 % Ca 9.0 mEq/dL Alb 4.5 g/dL AST 12 IU/L ALT 16 IU/L T bili 1.0 mg/dL D bili 0.6 mg/dL	(9/1/11) Na 142 mEq/L K 4.0 mEq/L Cl 107 mEq/L CO_2 24 mEq/L BUN 8 mg/dL SCr 1.2 mg/dL BG 172 mg/dL WBC 7.0 x 10^9/L Hgb 12 g/dL Hct 38 % Plt 400 x 10^9/L PTT 27 s INR 1.0 A1C 8 % Ca 9.0 mEq/dL Alb 4.5 g/dL AST 12 IU/L ALT 16 IU/L T bili 1.0 mg/dL D bili 0.6 mg/dL ECHO LVEF 33%	(12/15/10) Na 138 mEq/L K 4.2 mEq/L Cl 105 mEq/L CO_2 26 mEq/L BUN 6 mg/dL SCr 1.2 mg/dL BG 168 mg/dL WBC 6.0 x 10^9/L Hgb 12 g/dL Hct 38 % Plt 362 x 10^9/L PTT 32 s INR 1.0 A1C 9.5 % Ca 9.0 mEq/dL Alb 4.5 g/dL AST 12 IU/L ALT 16 IU/L T bili 1.0 mg/dL D bili 0.6 mg/dL

Family History	Other Tests
Father: DM, HTN, Colon cancer dx at age 66 Mother: Died CVA age 59	Central Bone Densitometry (DXA) (6/2/11) T-score: Left hip -2.8 Lumbar spine -2.5 Testosterone Level: Pending Vitamin D Level: Pending
Social History:	
Tobacco: Denies ETOH: Social Illicit Drugs – Denies Caffeine: 1-2 cups coffee a day Occupation: Welder Status: Married Children: 3 children Physical Activity: Sedentary Diet: Nothing notable	

Procedures:
Open reductions and internal fixation of left hip 9/3/11

Physical Exam: (9/15/11)
Obese African American male appearing to be older than stated age and using a walker. SKIN: overall dry but intact HEENT: PERRLA, neck supple, thyroid palpated with no mass noted LUNGS: clear bilaterally with no wheezing, no rhonchi, no rales, dry cough noted CARDIOVASCULAR: normal rate, rhythm, no gallops or murmurs noted ABDOMEN: normal GENITOURINARY: patient deferred RECTAL: patient deferred EXTREMITIES: no pitting edema, skin intact with no ulcerations, right hip ROM limited – 20 degree hip flexion with some pain (as expected with healing fracture) upon internal and external rotation, feet have appropriate sensation and blood flow NEUROLOGICAL: cranial nerves II – XII intact, deep tendon reflexes 2+ on left, 1+ on right, strength 4/5 RUE, 4/5 RLE

Allergies/Intolerances	Prescription Coverage
hydromorphone – itch and nausea	Insurance: Qualcare
glipizide - rash	Copay: $5 Preferred/ $ 20 Non preferred
	Cost per month: $ 125
	Annual Income: $ 65,000

Medication History	Indication	Start date
Metformin 1000mg twice daily	Diabetes	Increased to this dose during August 2011 hospital admission
Escitalopram 10 mg once daily	Anxiety	Unknown at this time
Metoprolol extended release 100 mg daily	HTN/ CHF	Unknown at this time
Aspirin 325mg once daily	s/p stroke	Added during August 2011 hospital admission
Clopidogrel 75 mg once daily	s/p stroke	Added during August 2011 hospital admission
Alprazolam 0.25 mg prn anxiety	Anxiety	Unknown at this time
Rosuvastatin 20 mg once daily	Hyperlipidemia	Changed from Simvastatin 80mg during August 2011 hospital admission
Furosemide 20mg once daily	CHF	Unknown at this time
Hydrochlorothiazide 25 mg once daily	HTN	Unknown at this time
Ramipril 5 mg once daily	HTN/CHF	Added during August 2011 hospital admission
Insulin aspart pen. Inject SQ as needed for FSBG 4 times daily: 2 units for FSBG 200-250 4 units for FSBG 251-300 6 units for FSBG 301-350 8 units for FSBG 351-400 Lancets + Test strips four times daily	DM	Added during August 2011 hospital admission
Omeprazole 20mg once daily	Unknown	Added during September 2011 hospital admission
Acetaminophen 650 mg 4 times daily as needed for pain	Hip Pain	Self Start
Oxycodone/acetaminophen 5/325 mg four times a day as needed for severe pain	Hip Pain	Only during September 2011 hospital admission, not continued on discharge. Patient tolerated well.

Evaluated for competition

ASHP Clinical Skills Competition - Pharmacist's Care Plan - 2011 Local Answer Key (2)

Problem Identification and Prioritization with Pharmacist's Care Plan

Team # _____

A. List all health care problems that need to be addressed in this patient using the table below.
B. Prioritize the problems by indicating the appropriate number in the "Priority" column below:
   1 = Most urgent problem (Note: There can only be one most urgent problem)
   2 = Other problems that must be addressed immediately or during this clinical encounter; **OR**
   3 = Problems that can be addressed later (e.g. a week or more later**)**

**Please note, there should be only a "1", " 2", or "3" listed in the priority column, and the number "1" should only be used once.*

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints

Osteoporosis	1	• Prevent future fractures, falls, and further bone loss
		• Prevent complications, mobidity/mortality from fracture
		• Restore quality of life and independence
			• Add oral bisphosphonate at treatment dose (e.g., alendronate 70 mg once weekly, risedronate 35 mg once weekly, ibandronate* 150 mg once monthly). *Ibandronate has been used off-label in this patient population.
			• Add calcium 1000-1200 mg and vitamin D (800 international units)
			• Fall prevention in the home
			• Weight-bearing exercise (if/when able after recovery from hip fracture)
			• Secondary options
			  ○ Teriperatide – usually reserved for men with the highest risk for fracture because it is expensive and must be taken as a subcutaneous injection every day. Can only be used for maximum of 2 years.
			  ○ Zoledronic Acid – FDA warning (9/2011) - risk for serious or fatal kidney injury. An argument could be made to use this as a first line option
			  ○ Denosumab – FDA approved in women only; used in men in Europe.
			  ○ Testosterone replacement – not indicated as no labs available
			Note: There maybe concern with the timeliness of initiation of bisphosphonate therapy. In studies, Zoledronic acid
				• BMD in ≥ 2 years
				• Follow-up any medication issues in 1 month
				• Tolerance to medication (e.g., GI upset)
				• Appropriate adherence to medication (e.g., remain upright after taking, no food/drink for 30-60 minutes, etc.)
				• Reduced risk of fracture
				• Stabilize rate of BMD decline

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints
			infusions started as early as 2 weeks post fracture with successful outcomes.	
Acute pain associated with hip fracture	2	• Reduce pain to an acceptable level for this patient • Improve patient function	• NSAID therapy with food using prescription strength scheduled doses (especially effective for bone pain) – because of CV risk: • Naproxen should be tried 1st due to lack of COX-2 selectivity and being cardiovascular risk averse. • Opioid combination agents (e.g., hydrocodone/ibuprofen) may be considered if NSAID ineffective or if student makes a sufficient argument to avoid NSAIDS in someone with this CV and GI bleed risk Note: AHA provided guidance on NSAID use in patients with cardiovascular disease in 2007. Please remember this is a guide and was reflective of the literature available at the time. This statement was made based on cardiovascular risk and the impact of medications on this. AHA guidance for pharmacological treatment of musculoskeletal pain Stepwise approach to pharmacological therapy for musculoskeletal symptoms in patients with or at risk of cardiovascular disease: • Acetaminophen, tramadol, or narcotic analgesics (short-term). • Nonacetylated salicylates. • Non-COX-2 selective NSAIDs. • NSAIDs with some COX-2 activity. • COX-2 selective NSAIDs.	• Pain scale and symptom improvement within 3-5 days • Reduction or elimination of pain with 1-2 weeks • Improvement in patient functioning • BUN/SCr at next visit • Medication side effects and/or adherence issues at next visit • Level of pain acceptable to patient and/or improvement in 1-10 scale • Maintain normal blood pressure • Improvement of pain on 1-10 scale • Blood pressure • Drowsiness and CNS changes • Edema

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints
Secondary stroke prevention	2	Prevent second stroke Maintain quality of life Prevent Death	• Discontinue either Aspirin or Clopidogrel (combination therapy ineffective but increases risk of bleed. Clopidogrel is favored as there is better data for this agent in DM patient with CVA; Aspirin however is usually 1st line agent and is less expensive) See GI Bleed prophylaxis.	- PLT, H/H -Signs of bleeding - Patient compliance
GI Bleed prophylaxis (Students may also term this problem "drug interaction")	2	Prevent ulcerative bleeds from antiplatelet therapy	• Discontinue omeparazole due to potential drug interaction with clopidogrel. • Switch to: -Famotidine 20mg twice daily -Pantoprazole 40 mg once daily – least possibility of drug-interaction among PPI's. Though it is unknown as to why this patient was discharged on Omeprazole, the risk of GI bleed from current antiplatelet regimen (Asprin 325mg or Clopidogrel 75mg and Naproxen) would warrant risk minimization.	
Hyperglycemia/Poorly controlled diabetes	2	Decrease mortality Decrease morbidity Decrease microvascular events	- Discontinue sliding scale insulin. -Add DPP-4 (examples include: sitagliptan 50mg daily; linagliptin 5mg daily) or GLP1 (exanetide 5 mcg subcutaneous BID) secondary to extremely elevated A1C, however students may chose to avoid this option d/t GI AE (i.e. need to urgently use the restroom in a patient with impaired mobility) -Thiazolidinedione use not preferred secondary to CHF - Sulfonylurea cannot be used as patient is allergic - Basal insulin regimen is a possibility if	-Fingerstick blood glucose three times a day before meals and at bedtime. -Fingerstick blood glucose goal is Preprandial (fasting or before meals): 70–130 mg/dl (3.9–7.2 mmol/l) Postprandial (1 to 2 hours after start of meal): < 180 mg/dl (10.0 mmol/l) at 1 to 2 hours -FBG, Scr, A1C < 7 % in 3 months -Urinalysis for proteinuria in 3 months -Signs and symptoms of hypoglycemia (altered mental status, tachycardia, diaphoresis, hypotension)

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints
			student makes sufficient argument, insulin glargine also possible given necessary A1C reduction required -Refer to diabetes educator/ dietitian	-Patient compliance
Chronic uncontrolled hypertension / Sub optimal congestive heart failure regimen	2	Prevent cardiac events Improve mortality Decrease rehospitalization	Possible ACE cough -change ACE-I, to ARB; examples include Losartan, valsartan etc. - discontinue hydrochlorothiazide (therapeutic duplication with furosemide) -start Aldosterone antagonist (Spironolactone preferred as first line. Consider eplerenone of patient cannot tolerate side effects of spironalactone) - Decrease caffeine intake - Dietary referral (BMI 33.4) - Sodium restriction - DASH eating plan -Encourage physical activity as tolerated	- Goal BP less than 130/80 - Left ventricular ejection fraction - Complaints of cough and shortness of breath, orthopnea, paroxysmal nocturnal dyspnea, exercise intolerance, pedal edema. - Daily weights - Potassium and SCr - In's and out's - Patient compliance
Hyperlipidemia	3	Decrease mortality Prevent cardiac event Slow atherosclerosis progression	- continue rosuvastatin Limit dietary intake of fats. -Saturated fat <7% of calories, cholesterol <200 mg/day	Goal : LDL<70, HDL >60, TG < 100 -Recheck lipid levels in 6 weeks -AST/ ALT 8 weeks (approximately 12 weeks after starting rosuvastatin). -CPK with any complaints of muscle soreness Statin complaints : muscle soreness or weakness - Patient compliance
Colon Cancer Screening	3	Prevent colon cancer	Colonoscopy - secondary to father diagnosis colon cancer at 66 yo	-Results from colonoscopy

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints
			(Colonoscopy should be performed at 50 years of age or 10 years before the diagnosis age of a first degree relative) -Encourage high fiber diet	-Change in bowel habits -Blood in stool
Anxiety disorder	3	Improve quality of life Reduce Stress	-Continue current drug regimen - consider tapering off BZD depending on usage	-Signs of abuse (consistent early prescription refills, not fulfilling responsibilities) -Monitor for signs of depression -Patient compliance